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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,699	07/15/2003	Masaya Tamaru	0649-0900P	4919

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EXAMINER
YODER III, CHRISS S

ART UNIT	PAPER NUMBER
2622	

NOTIFICATION DATE	DELIVERY MODE
05/04/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/618,699	TAMARU ET AL.
	Examiner	Art Unit	
	Chriss S. Yoder, III	2622	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 February 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-3</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-3</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>15 July 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed February 5, 2007 have been fully considered but they are not persuasive.

Applicant argues that in Jones, only green pixels have different sensitivities, i.e. a number of green pixels having a first sensitivity G_1 and a number of green pixels having a second sensitivity G_2, and thus for all pixels of the solid-state image pickup device, each pixel does **not** include a high-sensitivity pixel and a low-sensitivity pixel with each high-sensitivity pixel and each low-sensitivity pixel being unique to that pixel. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., each pixel includes a high-sensitivity pixel and a low-sensitivity pixel) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner points out that the claims simply recite an image pickup component having high and low sensitivity pixels, and nothing regarding each pixel having a high and low sensitivity pixel.

Applicant also argues, that neither Serizawa, Jones nor Skow disclose or suggest that a photometric characteristic of an output of the high-sensitivity pixels being different from that of the low-sensitivity pixels, or that an exposure value is calculated based on values of signal detected by the high-sensitivity pixels and values of signal detected by the low-sensitivity pixels, which are output from the solid-state image pickup

device in a single instance of photometry. As for the argument that a photometric

characteristic of an output of the high-sensitivity pixels being different from that of the

low-sensitivity pixels is not disclosed/suggested, the Examiner notes that Jones was

relied upon to teach the use of high-sensitivity and low-sensitivity pixels (column 4, lines

3-35), wherein high and low sensitivity pixels inherently have different photometric

characteristics. And as for the argument that an exposure value is calculated based on

values of signal detected by the high-sensitivity pixels and values of signal detected by

the low-sensitivity pixels, which are output from the solid-state image pickup device in a

single instance of photometry. First the Examiner points out that the limitation of "a

single instance of photometry" is interpreted to encompass the entire process of

photometry (i.e., all of the steps used in the process of calculating a

photometry/exposure value). And with respect to the references, Serizawa and Skow

are relied upon to teach the use of an image signal being used to calculate an exposure

value; and Jones is relied upon to modify Serizawa in claim 1, so as to provide high and

low sensitivity pixels picking up different exposure levels within the same image in order

to capture a single image instead of two, thereby reducing the amount of memory

needed and to reduce the effects of changes in the scene that occur between capturing

the two images (Jones: column 1, lines 52-65), and to modify Skow in claims 2-3, so as

to provide high-sensitivity pixels and low-sensitivity pixels forming the solid-state image

pickup in order to capture an image having a high dynamic range so that all areas of the

image, including light areas and dark areas are captured sufficiently (column 1, lines 28-

40). Therefore, by using high and low sensitivity pixels to output an image as

suggested by Jones to be used by Serizawa/Skow to calculate the exposure values

based on the picked up image signal, the limitations are met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serizawa

et al (US Patent # 6,593,970) in view of Jones (US Patent # 6,924,841).

2.   In regard to claim 1, note Serizawa discloses the use of an image pickup

apparatus, comprising a solid-state image pickup device having pixels (column 8, lines

12-20 and figure 1: 1010), control means for calculating an exposure value based on

values of signal detected by said pixels, which are output from said solid-state image

pickup device in a single instance of photometry (column 8, lines 41-67), and signal

processing means for reading data of an image picked up by said solid-state image

pickup device and processing according to the exposure value (column 8, lines 41-67).

Therefore, it can be seen that the Serizawa device lacks the use of high-

sensitivity pixels and low-sensitivity pixels forming the solid-state image pickup and that

the exposure value is calculated based on values of signal detected by the high-

sensitivity pixels and values of signal detected by the low-sensitivity pixels, wherein a

photometric characteristic of an output of the high-sensitivity pixels being different from

that of the low-sensitivity pixels. Jones discloses the use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image pickup, wherein a photometric characteristic of an output of the high-sensitivity pixels being different from that of the low-sensitivity pixels (column 4, lines 3-35, high and low sensitivity pixels are inherently different in photometric characteristic), and by combining this with the Serizawa device, the exposure value is calculated based on values of signal detected by the high-sensitivity pixels and values of signal detected by the low-sensitivity pixels. Jones teaches that the use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image pickup is preferred in order to capture a single image instead of two, thereby reducing the amount of memory needed and to reduce the effects of changes in the scene that occur between capturing the two images (column 1, lines 52-65). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Serizawa device to include the use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image pickup in order to capture a single image instead of two, thereby reducing the amount of memory needed and to reduce the effects of changes in the scene that occur between capturing the two images, as suggested by Jones.

3.   Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skow (US PGPub # 20030184659) in view of Jones (US Patent # 6,924,841).

4.   In regard to claim 2, note Skow discloses the use of an image pickup apparatus, comprising an image pickup means for picking up a subject image (paragraph 0016), received light quantity detecting means having pixels (paragraph 0016, the pixels of the

sensor), and control means for calculating an exposure value based on signal showing

received light quantity detected by said pixels, which are output from said received light

quantity detecting means in a single instance of photometry, and controlling said image

pickup means to pick up a subject image according to the exposure value (paragraphs

0022-0024).

Therefore, it can be seen that the Skow device lacks the use of high-sensitivity

pixels and low-sensitivity pixels forming the light quantity detecting means and that the

exposure value is calculated based on values of signal detected by the high-sensitivity

pixels and values of signal detected by the low-sensitivity pixels, wherein a photometric

characteristic of an output of the high-sensitivity pixels being different from that of the

low-sensitivity pixels. Jones discloses the use of high-sensitivity pixels and low-

sensitivity pixels forming the solid-state image pickup, wherein a photometric

characteristic of an output of the high-sensitivity pixels being different from that of the

low-sensitivity pixels (column 4, lines 3-35, high and low sensitivity pixels are inherently

different in photometric characteristic), and by combining this with the Skow device, the

exposure value is calculated based on values of signal detected by the high-sensitivity

pixels and values of signal detected by the low-sensitivity pixels. Jones teaches that the

use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image

pickup is preferred in order to capture an image having a high dynamic range so that all

areas of the image, including light areas and dark areas are captured sufficiently

(column 1, lines 28-40). Therefore, it would have been obvious to one of ordinary skill

in the art to modify the Skow device to include the use of high-sensitivity pixels and low-

sensitivity pixels forming the solid-state image pickup in order to capture an image

having a high dynamic range so that all areas of the image, including light areas and

dark areas are captured sufficiently, as suggested by Jones.

5.   In regard to claim 3, note Skow discloses the use of a photometer which

calculates an exposure value of the image pickup apparatus, comprising received light

quantity detecting means having pixels (paragraph 0016) and calculating means for

calculating the exposure value based on signal showing received light quantity detected

by said pixels, which are output from the received light quantity detecting means in a

single instance of photometry (paragraph 0024).

Therefore, it can be seen that the Skow device lacks the use of high-sensitivity

pixels and low-sensitivity pixels forming the light quantity detecting means and that the

exposure value is calculated based on values of signal detected by the high-sensitivity

pixels and values of signal detected by the low-sensitivity pixels, wherein a photometric

characteristic of an output of the high-sensitivity pixels being different from that of the

low-sensitivity pixels. Jones discloses the use of high-sensitivity pixels and low-

sensitivity pixels forming the solid-state image pickup, wherein a photometric

characteristic of an output of the high-sensitivity pixels being different from that of the

low-sensitivity pixels (column 4, lines 3-35, high and low sensitivity pixels are inherently

different in photometric characteristic), and by combining this with the Skow device, the

exposure value is calculated based on values of signal detected by the high-sensitivity

pixels and values of signal detected by the low-sensitivity pixels. Jones teaches that the

use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image

pickup is preferred in order to capture an image having a high dynamic range so that all areas of the image, including light areas and dark areas are captured sufficiently (column 1, lines 28-40). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Skow device to include the use of high-sensitivity pixels and low-sensitivity pixels forming the solid-state image pickup in order to capture an image having a high dynamic range so that all areas of the image, including light areas and dark areas are captured sufficiently, as suggested by Jones.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US005264940A: note the use of two exposure levels used to calculate a compensated exposure value.

US006219097B1: note the use of two exposure levels used to calculate a compensated exposure value.

US005929908A: note the use of multiple exposure levels used in dynamic range expansion.

US004706123: note the use of pixel level adjustment of exposure timing.

US007024108B2: note the use of two exposure levels used to calculate a compensated exposure value.

US006839087B1: note the use of multiple exposure levels used to calculate a compensated exposure value.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (571) 272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CSY
April 25, 2007

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